10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

EGFR-S1026 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5162

Product Information

Application	FC, IHC-P, WB
Primary Accession	P00533
Other Accession	NP_958440.1, NP_005219.2
Reactivity	Mouse, Rat, Human
Predicted	Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	134277
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	1956
Antigen Region	1004-1033
Other Names	EGFR; ERBB; ERBB1; HER1; Epidermal growth factor receptor; Proto-oncogene c-ErbB-1; Receptor tyrosine-protein kinase erbB-1
Dilution	FC~~1:10~50 IHC-P~~1:100~500 WB~~1:1000
Target/Specificity	This EGFR-S1026 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 1004-1033 amino acids from the C-terminal region of human EGFR-S1026.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	EGFR-S1026 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EGFR {ECO:0000303|PubMed:32926474, ECO:0000312|HGNC:HGNC:3236}
Function	Receptor tyrosine kinase binding ligands of the EGF family and activating

	several signaling cascades to convert extracellular cues into appropriate cellular responses (PubMed:10805725, PubMed:12297050, PubMed:12620237, PubMed:12873986, PubMed:15374980, PubMed:15590694, PubMed:17115032, PubMed:19560417, PubMed:21258366, PubMed:27153536, PubMed:2790960, PubMed:35538033, PubMed:9488479). Known ligands include EGF, TGFA/TGF-alpha, AREG, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF (PubMed:12297049, PubMed:15611079, PubMed:17909029, PubMed:20837704, PubMed:27153536, PubMed:2790960, PubMed:7679104, PubMed:8144591, PubMed:9419975). Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues (PubMed:10026169, PubMed:17349580, PubMed:18046415, PubMed:19560417, PubMed:19836242). The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades (PubMed:10026169, PubMed:17349580, PubMed:18046415, PubMed:19560417, PubMed:19836242). Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules (PubMed:27153536). May also activate the NF-kappa-B signaling cascade (PubMed:11116146). Also directly phosphorylates other proteins like RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G protein-coupled receptor signaling (PubMed:11602604). Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin (PubMed:11483589). Positively regulates cell migration via interaction with CCDC88A/GIV which retains EGFR at the cell membrane following ligand stimulation, promoting EGFR signaling which triggers cell migration (PubMed:20462955). Acts as a positive regulator of cGAS-STING signaling by mediating tyrosine phosphorylation of STING1, promoting production of type I interferon (IFN-alpha and IFN-beta), while inhibiting STING1 ability to regulate autophagy (PubMed:32926474). Plays a role in enhancing learning and memory performance (By similarity). Plays a role in mammalian pain signaling (long-lasting hypersensitivity) (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Endoplasmic reticulum membrane; Single-pass type I membrane protein. Golgi apparatus membrane; Single-pass type I membrane protein. Nucleus membrane; Single-pass type I membrane protein Endosome Endosome membrane. Nucleus. Note=In response to EGF, translocated from the cell membrane to the nucleus via Golgi and ER (PubMed:17909029, PubMed:20674546). Endocytosed upon activation by ligand (PubMed:17182860, PubMed:17909029, PubMed:27153536, PubMed:2790960). Colocalized with GPER1 in the nucleus of estrogen agonist-induced cancer-associated fibroblasts (CAF) (PubMed:20551055)
Tissue Location	Ubiquitously expressed. Isoform 2 is also expressed in ovarian cancers.

Background

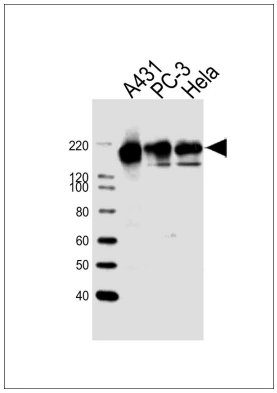
The protein encoded by this gene is a transmembrane glycoprotein that is a member of the protein kinase superfamily. This protein is a receptor for members of the epidermal growth factor family. EGFR is a cell surface protein that binds to epidermal growth factor. Binding of the protein to a ligand induces receptor dimerization and tyrosine autophosphorylation and leads to cell proliferation. Mutations in this gene are associated with lung cancer.

References

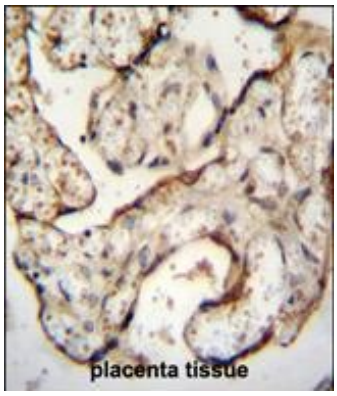
Perez, C.A., et al. J. Urol. 183(5):2062-2069(2010)
Koumakpayi, I.H., et al. Br. J. Cancer 102(7):1163-1173(2010)

Cortot, A.B., et al. Cancer (2010) In press :
Lee, Y.J., et al. J. Cancer Res. Clin. Oncol. (2010) In press :
Kawahara, A., et al. Hum. Pathol. (2010) In press :
Wu, S.L., et al. Mol. Cell Proteomics 5(9):1610-1627(2006)
Wu, S.L., et al. J. Proteome Res. 4(4):1155-1170(2005)
Abe, Y., et al. J. Biol. Chem. 273(18):11150-11157(1998)
Li, W., et al. Mol. Cell. Biol. 12(12):5824-5833(1992)
Krieg, J., et al. J. Biol. Chem. 267(27):19258-19265(1992)
Lowenstein, E.J., et al. Cell 70(3):431-442(1992)
Chi, D.D., et al. Hum. Mol. Genet. 1 (2), 135 (1992) :
Countaway, J.L., et al. J. Biol. Chem. 267(2):1129-1140(1992)

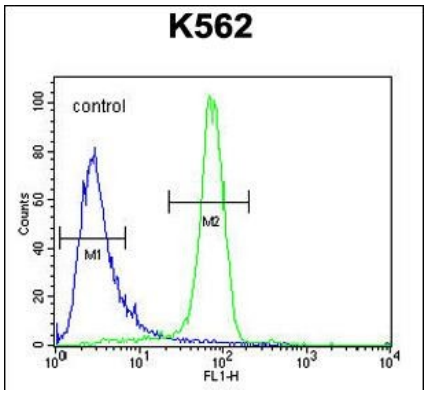
Images



Western blot analysis of lysates from A431,PC-3,Hela cell line (from left to right), using EGFR Antibody (S1026)(Cat. #AW5162). AW5162 was diluted at 1:1000 at each lane. A goat anti-rabbit IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.



EGFR-S1026 Antibody (C-term) (Cat. #AW5162) immunohistochemistry analysis in formalin fixed and paraffin embedded human placenta tissue followed by peroxidase conjugation of the secondary antibody and DAB staining.This data demonstrates the use of the EGFR-S1026 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



EGFR-S1026 Antibody (C-term) (Cat. #AW5162) flow cytometric analysis of K562 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.